

REMARKS

Claims 1-4 are pending in the present application. Claims 5-20 have been cancelled without prejudice or disclaimer to the subject matter contained therein. The Applicant reserves the right to file a divisional application directed to the subject matter contained in cancelled claims 5-20.

Rejection under 35 U.S.C. §103 over Asakawa

Claims 1-5 have been rejected under 35 U.S.C. §103 as being unpatentable over Asakawa (US Patent 6,604,804). This rejection under 35 U.S.C. §103 to claims 1-4, and as it may be applied to newly added claims 5-20, is respectfully traversed.

In formulating the rejection under 35 U.S.C. §103, the Examiner alleges that Asakawa discloses receiving input electronic data of an image intended to be printed (Figure 5 of Asakawa); inspecting the data to determine both the lead edge (L.E.) and the trail edge (T.E.) blank borders of the image (column 4, lines 53-55 and column 8, lines 22-29 of Asakawa); and determining whether the blank borders exceed a minimum design distance and adjust imaging and paper delivery timing accordingly to increase subsequent printing speed (column 8, lines 1-29; column 7, lines 38-51; and column 5, lines 20-44 of Asakawa).

However, the Examiner recognizes that Asakawa fails to disclose a determination of whether the blank borders exceed a minimum design distance. To meet this deficiency in the teachings of Asakawa, the Examiner argues, "While [Asakawa] does not explicitly disclose that blank borders exceed a minimum design distance, the calculation of such information is possible."

Based upon these allegations, the Examiner concludes that Asakawa renders the presently claimed invention obvious to one of ordinary skill in the art. These allegations and conclusion are respectfully traversed.

Independent claim 1

As set forth above, independent claim 1 recites a method for minimizing the Inter-Document Zone in multi-pass printing system architectures with print engines employing asynchronous paper delivery and providing control over paper feed and imaging times. The claimed method receives input electronic data of an image intended to be printed; inspecting the data to determine a lead edge blank border of the image; and on a page by page basis determining whether the lead edge blank border exceeds a minimum design distance and adjust imaging and paper delivery timing accordingly to increase subsequent printing speed.

As previously submitted, the Examiner recognizes that Asakawa fails to disclose a determination of whether the leading edge blank border exceeds a minimum design distance. To overcome this deficiency in the teachings of Asakawa, the Examiner asserts that the deficiency is moot because such calculations are possible.

More specifically, the Examiner appears to hold forth that when a reference is silent to the claimed parameter/calculation, but the calculation is possible (the realization that this calculation is possible is solely based upon the Applicant's disclosure [hindsight by the Examiner]), one of ordinary skill in the art would be motivated by the knowledge that such a calculation is possible to use such a calculation in lieu of the calculation taught by the prior art. This position by the Examiner is arbitrary and capricious.

A determination cannot be declared obvious because the Examiner asserts that the determination is possible. Many determinations are possible, but the mere possibility that a determination may exist does not render the determination obvious. Moreover, assuming that the mere possibility that a determination may exist is a proper criterion, must the possibility be more likely than not, clear and convincing, 80% possible, 99.99% possible, etc.? In other words, what is the threshold to convert a possibility into a finding of obviousness?

Thus, the Examiner has failed to establish a prima facie case with respect to obviousness under 35 U.S.C. §103.

However, notwithstanding the Examiner's failure to establish a prima facie case with respect to obviousness under 35 U.S.C. §103, the teachings of Asakawa fail to render the presently claimed invention obvious to one of ordinary skill in the art.

Asakawa teaches, at column 8, lines 1-29, the determination of the remainder data (R) based upon the gap (G) between two documents, the partial data left in the swath buffer (Pd), and the swath height (S) of the printer head. The determined remainder data (R) provides information to the printing system with respect to how much of the lower portion of a printer head can be utilized to print the next page. Asakawa teaches that the determination of remainder data (R) enables the more efficient printing results.

The Examiner asserts that Asakawa teaches, at column 8, lines 22-29, a determination of a gap which includes margins. The Examiner has utilized this passage of Asakawa in a manner that is inconsistent with the context of Asakawa.

More specifically, Asakawa teaches, at column 8, lines 22-29, that the "valuation" of G may include "margin offsets into the printing area of each page." Moreover, Asakawa teaches, at column 8, lines 1 & 2, that G is defined as the "blank image/GAP between end of one page and the beginning of next."

Thus, Asakawa teaches that G may be the "blank image/GAP between end of one page and the beginning of next," or the "blank image/GAP between end of one page and the beginning of next" plus a margin value. Based upon this value G, Asakawa teaches that the remainder data (the data corresponding to the top portion of the next page) can be calculated so that the swath buffer can be loaded with the appropriate data.

Asakawa teaches that the determination of G is a straight forward measurement and based upon a comparison of G with the size of the swath buffer, the swath buffer is loaded a particular way. In other words, Asakawa teaches that the swath buffer is loaded based upon a difference between G, the size of the swath buffer, and the amount of data from a current page. Asakawa fails to teach that the swath buffer is loaded based whether G exceeds some threshold.

In contrast, the claimed invention inspects the data to determine a lead edge blank border of the image. Moreover, the claimed invention, on a page by page basis, determines whether the lead edge blank border exceeds a minimum design distance and adjusts imaging and paper delivery timing accordingly to increase subsequent printing speed. In other words, the adjustment of the presently claimed invention is based upon a comparison; whereas Asakawa teaches that the swath buffer is loaded based upon a calculation, not a comparison.

Furthermore, as previously submitted, the teachings of Asakawa are not concern with inter-document zone management. Moreover, Asakawa fails to disclose or suggest determining the size of the blank borders of a page because Asakawa is not concern with inter-document zone management, but minimizing the number of swaths a printer head takes to print multi-pages.

Therefore, contrary to the Examiner's assertion, Asakawa fails to disclose or suggest inspecting the data to determine the lead edge blank border of the image, as set forth by independent claim 1. Moreover, Asakawa fails to disclose or suggest determining, on a page by page basis, whether the lead edge blank border exceeds a minimum design distance and adjusting imaging and paper delivery timing accordingly to increase subsequent printing speed, as set forth by independent claim 1.

Dependent claims 2-4

With respect to dependent claims 2-4, the Applicant, for the sake of brevity, will not address the reasons supporting patentability for these individual dependent claims, as these claims depend directly from allowable independent claim 1. The Applicant reserves the right to address the patentability of these dependent claims at a later time, should it be necessary.

Accordingly, in view of remarks set forth above, the Examiner is respectfully requested to reconsider and withdraw the rejection under 35 U.S.C. §103.

Entry of Amendments under 37 C.F.R. 1.116

The Examiner is respectfully requested to enter the above amendments under 37 C.F.R. 1.116 for the following reasons.

The Examiner is respectfully requested to enter the above amendments under 37 C.F.R. 1.116 because the amendments place the application in condition for allowance and materially reduce and simplify the issues, thereby placing the application in better condition for Appeal. The Examiner is also respectfully requested to enter the above amendments under 37 C.F.R. 1.116 because the amendments do not require any further consideration and/or search and do not raise the issue of new matter because the amendments only address grammatical issues and/or cancel withdrawn claims. Accordingly, entry of these amendments under 37 C.F.R. 1.116 is proper.

CONCLUSION

Accordingly, in view of all the reasons set forth above, the Examiner is respectfully requested to reconsider and withdraw the present rejection. Also, an early indication of allowability is earnestly solicited.

Respectfully submitted,



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